



# UNITED STATES PATENT AND TRADEMARK OFFICE

7C

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,214	09/25/2000	Christine E. Browning	9010-3	4277

20792 7590 01/29/2004

MYERS BIGEL SIBLEY & SAJOVEC  
PO BOX 37428  
RALEIGH, NC 27627

EXAMINER

LY, CHEYNE D

ART UNIT PAPER NUMBER

1631

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p><b>Application No.</b></p> <p>09/670,214</p>	<p><b>Applicant(s)</b></p> <p>BROWNING ET AL.</p>	
	<p><b>Examiner</b></p> <p>Cheyne D Ly</p>	<p><b>Art Unit</b></p> <p>1631</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-74 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-74 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
     a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>11/03</u> | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Applicants' arguments, filed November 06, 2003, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.
2. The addition of new claims 69-74 has been acknowledged.
3. Claims 1-74 are examined on the merits.

### **IDS**

4. Document 2 of PTO form 1449, November 06, 2003 has not been considered because said document is not published.

### **CLAIM REJECTIONS - 35 USC § 102**

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 7, 10, 11, 17-22, 69, and 72 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Herrington (1996).
7. This rejection is maintained with respect to claims 1-4, 7, 10, 11, and 17-22, as recited in the previous office action, mailed August 04, 2003. The instant rejection has been extended to claims 69 and 72.

## **RESPONSE TO ARGUMENTS**

8. Applicants argue that Herrington does not disclose many of the elements of claim 1.

Specifically, Herrington does not disclose the limitations of a plurality of study types from which a selection is made. Further, the combination of Herrington and OSHA Document 57:6356 is not proper basis for an anticipation rejection. Applicants' arguments have been fully considered and found to be unpersuasive as discussed below.

9. Specific to Applicants' argument that the limitation of "selecting a study type to be performed on the chemical process" requires a plurality of study types. It is acknowledged that the act of "selecting" is to take as a choice from among several. However, the said limitation does not specifically limit the step of "selecting" to be made from among several study types. Therefore, the limitation of "selecting" could easily be interpreted as an act of selecting a study type or no study type (a plurality of choices). Further, Herrington et al. discloses "the company has been actively engaged in compliance efforts for OSHA's Process Safety Management regulation (1910.119) for over four years. Mechanical Integrity, paragraph (j) of the regulation, has been one of the major efforts (select from a plurality of choices) of the last two years" (page 110, column 1, lines 22-27), as in instant claims 69 and 72.

10. Specific to Applicants' argument that Herrington does not disclose any limitations of claim 1 and the cited disclosure "does not appear to bear any relationship to the elements of Claim 1", it is noted that consistent with the scope of the instant claims Herrington anticipates every limitation of claim 1. More specifically, Applicants argue that the disclosure of Herrington is distinct from the instant claimed invention because said disclosure

Art Unit: 1631

is directed to a Mechanical Integrity (MI) program. Herrington discloses MI is a key provision of the OSHA Process Safety Management of Highly Hazardous Chemicals standard regulation and the implementation of MI is to ensure that process equipment containing and controlling highly hazardous chemicals is maintained to high standards, therefore, minimizes accidental chemical release (Abstract etc.). Further, Applicants disclose in the instant specification “[i]n order to conduct PHAs according to the present invention, hazard (either real or hypothetical) are developed for chemical processes based from normal operations or failures of process components (i.e. equipments, instruments, etc.); (page 4, lines 3-6). The above disclosure, which is consistent in scope with the instant invention, is more than adequate in anticipating the limitation of a general chemical process of the instant claim.

11. Specific to Applicants’ argument directed to the OSHA Document 57:6356 which Applicant cited as being not proper basis for an anticipation rejection. The OSHA Document 57:6356 has been used not as prior art in the previous Office Action, but, only to expand on OSHA regulation 29 CFR 1910.119, which has been cited by Herrington. Therefore, the use of a secondary reference (OSHA Document 57:6356) to expand on OSHA regulation 29 CFR 1910.119 was properly made (MPEP §2131.01, III). The instant specification discloses “to customize a study type by modifying an existing study type (i.e. in order to make the study specific for a particular site or plant) (page 15, lines 8-10). Consistent with the instant specification, Herrington discloses Mechanical Integrity program for other sites require thorough review of the site’s covered processes with input from knowledgeable operations and technical personnel; and specific to Tennessee Eastman division, the MI program plan

Art Unit: 1631

was designed and piloted in 1993-1994 (customize) (page 110, column 1, lines 27-29). The disclosure of Herrington and citation of the OSHA document 57:6356 as directed to 29 CFR 1910.119, which discloses many businesses develop custom checklist or what-if questions as part of their PHA to determine which PHAs to conduct first (page 20, lines 23-28) adequately anticipates the limitation of customizing of instant claims 10 and 11.

12. It is re-iterated Herrington discloses a method for using the Tennessee Eastman Division Process Hazard Analysis (TEDPHA) for studying the Mechanical Integrity program in compliance with OSHA's PSM regulation (1910.119) (page 110, column 1, lines 22-25) to ensure that process equipment containing and controlling highly hazardous chemicals is maintained to high standards which minimizes the chances of accidental release and subsequent injuries or accidents (Abstract etc.; page 110, column 1, lines 7-11; column 2, lines 8-14). The method comprises charging each to define the types and frequencies of inspections and develop guidelines for correcting deficiencies (page 111, column 1, lines 15-19). Further, the method of Herrington is performed in a data processing system such as a database (page 112, column 1, line 22 to column 2, line 6), as in instant claims 1-3.

13. The inclusion of OSHA document by Clark (September 29, 1993) is not used as prior art but only to disclose that PSM of Highly Hazardous Chemical standards, 29 CFR 1910.119 as defined by OSHA as directed to "worst-first" basis PHA, processes are divided into nodes according to their scheduled dates, and the most hazardous process is completed first (Clark, page 1, lines 2-17), as in instant claims 4 and 7.

Art Unit: 1631

14. OSHA document 57:6356 as directed to 29 CFR 1910.119 discloses many businesses develop custom checklist or what-if questions as part of their PHA to determine which PHAs to conduct first (page 20, lines 23-28), as in instant claims 10 and 11.

15. The employer complete a compilation of written process safety information before conducting any process hazard analysis (page 4, lines 21-22), a report directed to an incident is generated; establish a system to promptly address and resolve the incident, resolutions; and corrective actions are documented (page 11, (m) (4) and (5)), as in instant claims 15 and 16.

16. An emergency resolution plan is generated wherein a number of interim actions and the final action are listed (page 26, lines 15-28), as in claim 17.

17. The resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed (page 7, (5)), as in instant claim 18.

18. A tracking system might include periodic status reports shared with affected levels of management, specific reports such as completion of an engineering study, and a final implementation report. This type of tracking system provides the employer with the status of the corrective action (page 28, ¶ 6 to page 29, ¶ 1), as in instant claims 19-22.

### **CLAIM REJECTIONS - 35 USC § 103**

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1631

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. Claims 1-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrington (1996) in combination with Heinlein et al. (US 5,950,217 A) taken with Occupational Safety and Health Administration (61:56746-56856, November 04, 1996).

22. This rejection is maintained with respect to claims 1-68 as recited in the previous office action, mailed August 04, 2003. The instant rejection has been extended to claims 69-74.

#### **RESPONSE TO ARGUMENTS**

23. Applicants' arguments directed to claims 1-4, 7, 10, 11, and 17-22 as being disclosed by the primary reference, Herrington, have been addressed above. The above responses to Applicants' argument as directed to said primary reference have been extended to the instant rejection as directed to dependent claims 5, 6, 8, 9, 12-16, 23-68, and new claims 69-74.

24. Applicants' arguments as directed to claims 5, 6, 8, 9, 12-16, and 23-68 wherein Heinlein et al. does not describe or suggest the generation of a resolution plan for a hazard scenario as recited in Claim 1. Applicants' arguments have been fully considered and found to be unpersuasive as discussed below.



25. Specific to claims 23 and 24 as directed to the limitation of the generation of a resolution database after the step of generating the resolution plan, the method of Herrington is performed in a data processing system such as a database (page 112, column 1, line 22 to column 2, line 6) and the system of Heinlein et al. is established to promptly address findings and recommendations, assure recommendations are documented and resolved, develop a written schedule for completing actions, communicate actions to operating, maintenance and other employees, and to perform and document the actions taken (column 2, lines 18-38). The combination of Herrington as cited above and Heinlein et al. as a whole adequately discloses the limitations of claims 23 and 47.

26. Specific to claims 25 and 47, Heinlein et al. discloses a computer system and method for process safety with the object to prevent employee exposures to chemical hazards according OSHA developed process safety management standards (column 1, lines 61-66). The said method comprises set priorities and conducts analysis according to required schedules; performing a process hazard assessment (PHA); update and reevaluate PHAs at least every five years. The combination of Herrington as cited above and Heinlein et al. as a whole adequately discloses the limitations of claims 25 and 47.

27. Specific to claims 35, 36, 57 and 58, Applicants are directed to the argument above as directed to claims 10 and 11 (¶ 11 on this instant action).

28. Specific to claim 9, Herrington discloses the classification of piping into three classes based on the potential risks once failure occurs that determines the frequency of scrutiny (ranking) as defined by in-house criteria based on number of injuries offsite consequences, and dollar value of damages (risk matrix) (page 111, column 2, lines 1-27 and Table 3).

Art Unit: 1631

Occupational Safety and Health Administration (61:56746-56856, November 04, 1996) discloses a method of studying of employee exposure to a hazardous chemical such as 1,3-Butadiene by determining the risk of exposure (page 27, lines 21-22) and ranking the job in accordance with exposure, and develop a job-exposure matrix (page 28, lines 13-17). Table V-16 (page 87) discloses a matrix citing consequent severity in terms of disease and likelihood of occurrences. The combination of Herrington as cited above, Heinlein et al., and Occupational Safety and Health Administration (61:56746-56856, November 04, 1996), as a whole, adequately discloses the limitations of claims 9, 12-14, 37, 56, and 59.

29. Applicants argue that the motivation to combine the above references as cited in paragraphs 26 and 27 is not the particular type of motivation that is required under the MPEP and the case law described above. Applicants' argument has been fully considered and found to be unpersuasive as discussed below.

30. The combination of Herrington, Heinlein et al., and Occupational Safety and Health Administration (61:56746-56856, November 04, 1996), as a whole, adequately discloses the limitations of claims 1-74.

31. Herrington disclose an improvement for being in compliance with OSHA's PSM regulation (1910.119) (page 110, column 1, lines 22-25 and page 111, column 2, lines 1-5). While, Heinlein et al. discloses a computer system for reducing the time it takes to implement the PSM regulation (1910.119) (column 1, lines 61-62 and column 2, lines 60-62). An artisan of ordinary skill in the art at the time of the instant invention would have been motivated by the improvement emphasized by Herrington for a method for being in

Art Unit: 1631

compliance with OSHA's PSM regulation and to reduce implementation time by using the computer system of Heinlein et al.

32. Further, Occupational Safety and Health Administration (61:56746-56856) discloses the implementation of OSHA's PSM regulation (1910.119) as directed toward such chemical hazard as 1,3-Butadiene. One of ordinary skill in the art would have been further motivated to improve on the computer system for implementing OSHA's PSM regulation (1910.119) as taught by Herrington and Heinlein et al. toward such hazard chemical as 1,3-Butadiene as taught by Occupational Safety and Health Administration (61:56746-56856).

33. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method and computer system for being in compliance with OSHA's PSM regulation (1910.119), as taught by Herrington and Heinlein et al., as directed to 1,3-Butadiene as taught by Occupational Safety and Health Administration (61:56746-56856).

34. It is re-iterated that Herrington discloses the limitations to claims 1-4, 7, 10, 11, 17-22, 69, and 72 as discussed above.

35. However, Herrington does not disclose the limitations of claims 5, 6, 8, 9, 12-16, 23-68, 70, 71, 73, and 74.

36. Heinlein et al. discloses a computer system and method for process safety with the object to prevent employee exposures to chemical hazards according OSHA developed process safety management standards (column 1, lines 61-66). The said method comprises set priorities and conducts analysis according to required schedules; performing a process hazard

Art Unit: 1631

assessment (PHA); update and reevaluate PHAs at least every five years. Further, a system is established to promptly address findings and recommendations, assure recommendations are documented and resolved, develop a written schedule for completing actions, communicate actions to operating, maintenance and other employees, and to perform and document the actions taken (column 2, lines 18-38), as in instant claims 5, 6, 29, and 31.

37. An apparatus is provided for inputs and retrieving the above documents from a database (Abstract etc.), as in instant claims 23, 24, 45, 46, 67, and 68.

38. Heinlein et al. discloses a system and computer program for performing the methods discussed above (column 4, lines 14-67 to column 5, lines 1-11 and claims 1-5), as in instant claims 25 and 47.

39. The disclosure of Herrington in combination with Heinlein et al. above suggest the limitations of the instant claims 26, 27, 32, 35, 36, 38-44, 48, 49, 54, 57, 58, and 60-66.

40. Occupational Safety and Health Administration (61:56746-56856, November 04, 1996) discloses a method of studying of employee exposure to a hazardous chemical such as 1,3-Butadiene by determining the risk of exposure (page 27, lines 21-22) and ranking the job in accordance with exposure, and develop a job-exposure matrix (page 28, lines 13-17) as in claims 8, 9, 12, 33, 34, 37, 55, 56 and 59.

41. Table V-16 (page 87) discloses a matrix citing consequent severity in terms of disease and likelihood of occurrences, as in instant claims 13 and 14.

42. Herrington discloses a method for being in compliance with OSHA's PSM regulation (1910.119) (page 110, column 1, lines 22-25). While, Heinlein et al. discloses a computer system for reducing the time it takes to implement the PSM regulation (1910.119) (column 1,

Art Unit: 1631

lines 61-62 and column 2, lines 60-62). An artisan of ordinary skill in the art at the time of the instant invention would have been motivated to partake the concept emphasized by Herrington for a method for being in compliance with OSHA's PSM regulation and to reduce implementation time by using the computer system of Heinlein et al.

43. Further, Occupational Safety and Health Administration (61:56746-56856) discloses the implementation of OSHA's PSM regulation (1910.119) as directed toward such chemical hazard as 1,3-Butadiene. One of ordinary skill in the art would have been further motivated to partake the concept of a computer system for implementing OSHA's PSM regulation (1910.119) as taught by Herrington and Heinlein et al. toward such hazard chemical as 1,3-Butadiene as taught by Occupational Safety and Health Administration (61:56746-56856).

44. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method and computer system for being in compliance with OSHA's PSM regulation (1910.119), as taught by Herrington and Heinlein et al., as directed to 1,3-Butadine as taught by Occupational Safety and Health Administration (61:56746-56856).

### **CONCLUSION**

45. NO CLAIM IS ALLOWED.

46. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

47. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


48. Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (see 37 CFR § 1.6(d)). The CM1 Fax Center number is (703) 872-9306.

49. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

50. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (571) 272-0722.

51. Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner, Tina Plunkett, whose telephone number is (571) 272-0549 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

C. Dune Ly  
1/21/04

  
ARDIN H. MARSCHER  
PRIMARY EXAMINER